What is claimed is:

1. An isolated thermal interface comprising a flexible graphite sheet having two major surfaces, at least one of the major surfaces coated with a protective coating sufficient to inhibit flaking of the particles of graphite.

2. The thermal interface of claim 1 wherein the protective coating comprises a thermoplastic material.

3. The thermal interface of claim 2 wherein the thermal plastic comprises polyethylene, a polyester or a polyimide.

4. The thermal interface of claim 3 wherein the protective coating is no more than about 0.025 millimeters in thickness.

5. The thermal interface of claim 4 wherein the protective coating is effective to electrically isolate the coated major surface of the sheet of flexible graphite particles.

6. The thermal interface of claim 1 wherein the flexible graphite sheet has edge surfaces, and at least one edge surface of the flexible graphite sheet is coated with a protective coating sufficient to inhibit flaking of the particles of graphite.

7. The thermal interface of claim 1 which further comprises a layer of adhesive interposed between the protective coating and the flexible graphite sheet.

8. The thermal interface of claim 7 wherein the adhesive is selected from the group consisting of acrylic and latex materials.

9. The thermal interface of claim 7 wherein the layer of adhesive is no more than about 0.015 millimeters in thickness.

10. A process for producing a thermal interface having protective coating sufficient to inhibit flaking of the particles of graphite, the process comprising (a) forming a flexible graphite sheet into the size and shape desired for a thermal interface, wherein the formed flexible graphite sheet has at least one major surface and at least one edge surface; and (b) coating the formed flexible graphite sheet with a material to form a protective coating, such that the material forms a protective boundary about the flexible graphite sheet.

11. The process of claim 10 wherein the material is coated on the formed flexible graphite sheet so as to flow completely about at least one of the major surfaces and at least one of the edge surfaces of the sheet, and extend beyond at least one of the edge surfaces of the sheet.

12. The process of claim 11 wherein the material is coated on the formed flexible graphite sheet by spray coating, roller coating or hot laminating press.

13. The process of claim 10 wherein the material is coated on the formed flexible graphite sheet on at least one of its major surfaces.

14. The process of claim 13 wherein the material is coated on the formed flexible graphite sheet by roller coating, laminating with adhesive, or hot press laminating, and then cutting the formed flexible graphite sheet into the desired size and shape of the thermal interface.

15. The process of claim 10 wherein the material comprises a thermoplastic material.

16. The process of claim 15 wherein the material comprises polyethylene, a polyester or a polyimide.

17. The process of claim 16 wherein the material is no more than about 0.025 millimeters in thickness.

18. The process of claim 10 wherein an adhesive is coated on the formed flexible graphite sheet between the material and the formed flexible graphite sheet.

19. The process of claim 18 wherein the adhesive comprises an acrylic or a latex material.

20. The process of claim 19 wherein the layer of adhesive is no more than about 0.015 millimeters in thickness.

ADD C3>